

Interview Summary

Application No.

09/818,138

Applicant(s)

YONEDA ET AL.

Examiner

Pedro J. Cuevas

Art Unit

2834

All participants (applicant, applicant's representative, PTO personnel):

(1) Pedro J. Cuevas.

(3) Kurt Hamre.

(2) Karl Tamai.

(4) _____.

Date of Interview: 15 April 2013.

Type: a) ☐ Telephonic b) ☐ Video Conference
c) ☒ Personal [copy given to: 1) ☐ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
If Yes, brief description: _____.

Claim(s) discussed: 1 and 7.

Identification of prior art discussed: U.S. Patents No. 6,351,050 to Coles and No. 6,049,153 to Nishiyama et al.

Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☒ N/A.

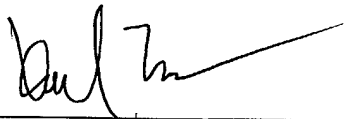
Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicants representative discuss and explained how the proposed amendments define the claimed invention over the prior art rejection.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

KARL TAMAI
PRIMARY EXAMINER

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.


Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case unless both applicant and examiner agree that the examiner will record same. Where the examiner agrees to record the substance of the interview, or when it is adequately recorded on the Form or in an attachment to the Form, the examiner should check the appropriate box at the bottom of the Form which informs the applicant that the submission of a separate record of the substance of the interview as a supplement to the Form is not required.

It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

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A Professional Corporation

Fax Transmission | April 11, 2003

TO: Commissioner for Patents
Attn: Examiner Cuevas
Patent Examining Corps
Facsimile Center
Washington, D.C. 20231

FROM: Curtis B. Hamre

OUR REF: 8373.234US01
TELEPHONE: 612.336.4722

Total pages, including cover letter: 6

Mr. Cuevas, proposed claims 1 and 7 are enclosed for discussion at our interview at 11 a.m. on Tuesday, April 15th. Also, there are enclosed three sketches which will serve as the basis for an explanation that I will present to you. I look forward to our meeting.

PTO FAX NUMBER 1-703-746-4166

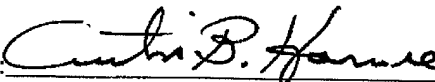
If you do NOT receive all of the pages, please telephone us at 612.336.4722, or fax us at 612.332.9081.

Title of Document Transmitted:
Applicant: YONEDA ET AL.
Serial No.: 09/818,138
Filed: MARCH 27, 2001
Group Art Unit: 2834
Our Ref. No.: 8373.234US01

PROPOSED CLAIMS

Please charge any additional fees or credit overpayment to Deposit Account No. 13-2725. Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers, if appropriate.

By:



Name: Curtis B. Hamre

Reg. No.: 29,165

I hereby certify that this paper is being transmitted by facsimile to the U.S. Patent and Trademark Office on the date shown below.

Curtis B. Hamre

Signature

Date

GEN033.DOT

S/N 09/818,138

PATENTIN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	YONEDA ET AL.	Examiner:	P. CUEVAS
Serial No.:	09/818,138	Group Art Unit:	2834
Filed:	MARCH 27, 2001	Docket No.:	8373.234US01
Title:	ELECTRIC POWER STEERING APPARATUS		

CERTIFICATE UNDER 37 CFR 1.6(d):

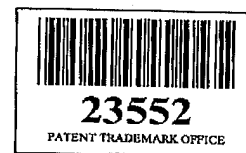
I hereby certify that this paper is being transmitted by facsimile to the U.S. Patent and Trademark Office on April 11, 2003.

By: _____

Name: Denise Chamberlin

PROPOSED CLAIMSCommissioner for Patents
Washington, D.C. 20231

Dear Sir:

In the Claims

Proposed claims 1 and 7:

1. An electric power steering apparatus including an electric motor for applying a steering assist torque, corresponding to a steering torque, to a steering system, said electric motor comprising:

an annular outer stator having circumferentially arranged [stator windings of nine or a multiple of nine poles] nine salient poles radially arranged at an equal pitch, each of said salient poles having a stator winding wound therearound; and

an inner rotor positioned within said outer stator and consisting of permanent magnets of eight poles magnetized radially arranged at equal pitch so that N and S poles are alternately arranged circumferentially;

said stator windings being connected as groupings such that they can be driven by electric power of three phases, each of said groupings comprising three poles of said stator windings

which are positioned as ever other one of said stator windings for said three poles, each grouping being connected in series.

7. An electric power steering apparatus including an electric motor for applying a steering assist torque, corresponding to a steering torque, to a steering system, said electric motor comprising:

an annular outer stator having circumferentially arranged [stator windings of nine or a multiple of nine poles] nine salient poles radially arranged at an equal pitch, each of said salient poles having a stator winding wound therearound; and

an inner rotor positioned within said outer stator and consisting of permanent magnets of eight poles magnetized radially arranged at equal pitch so that N and S poles are alternately arranged circumferentially;

said stator windings being connected as groupings such that they can be driven by electric power of three phases, each of said groupings comprising three poles of said stator windings which are positioned adjacent to each other, each grouping being connected in series.

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Diagram illustrating a 3-phase 12-pulse rectifier circuit. The transformer has three primary windings (A, B, C) and three secondary windings (A, B, C). The secondary windings are connected in series to form a 12-pulse output. The diagram shows the transformer core, windings, and the resulting 12-pulse output waveform.

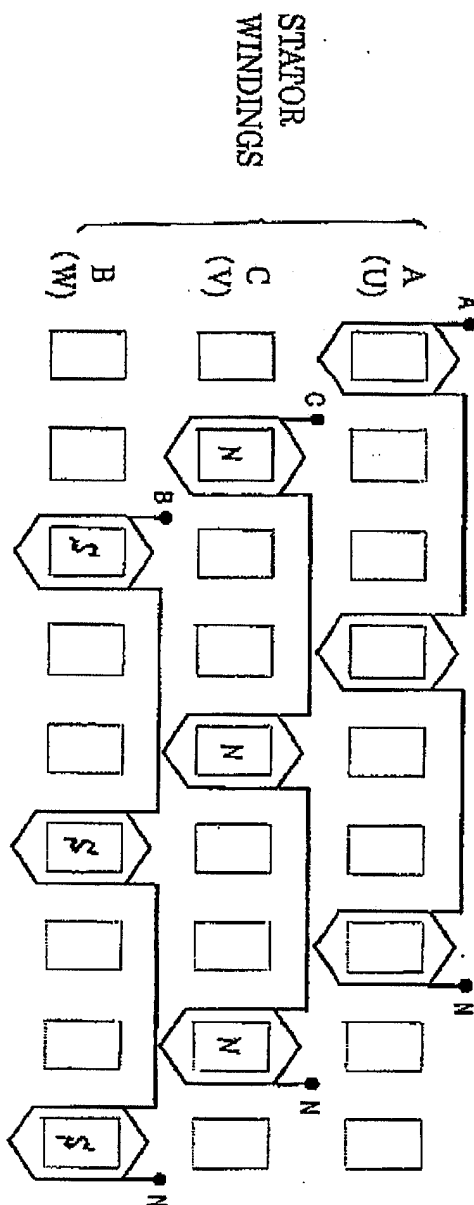
STATPROB
(Excitation pattern: B-C)

ROTOR

A: attracting	R	R	R	A	R	A	R
R: repelling							

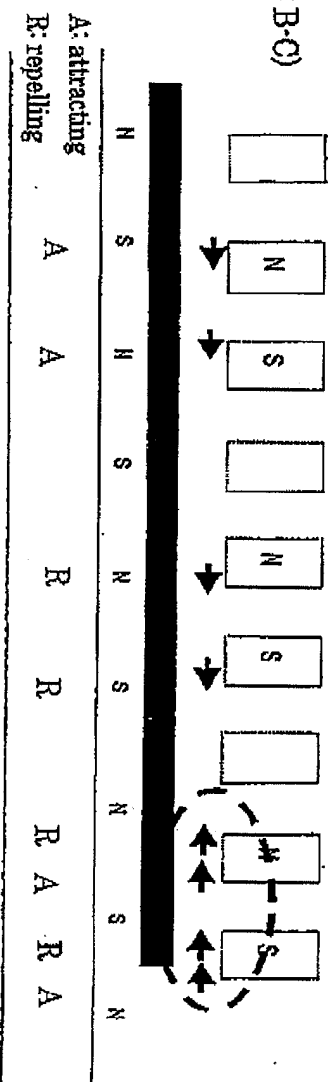
Due to attracting and repelling of magnetic forces, the stator forces the rotor leftward, thereby enabling the motor to produce a large torque.

Sketch-C: Developed view of a motor according to a hypothetical combination of *Coles* (US 6,351,050) and *Nishiyama* (US 6,049,153)



STATOR
(Excitation pattern: B-C)

ROTOR



Attracting and repelling of magnetic forces are partly cancelled out, so that the motor can produce only a small torque.